Heart, Lung and Circulation (2014) **23,** 309–313
1443-9506/04/$36.00
http://dx.doi.org/10.1016/j.hlc.2013.08.005

ORIGINAL ARTICLE

Familial Hypercholesterolaemia in Primary Care: Knowledge and Practices among General Practitioners in Western Australia

Damon A. Bell [a,b,c*], Jacquie Garton-Smith [d], Alistair Vickery [e], Andrew B. Kirke [f], Jing Pang [c], Timothy R. Bates [a,c], Gerald F. Watts [a,c]

[a]Lipid Disorders Clinic, Department of Internal Medicine, Royal Perth Hospital, Perth, Australia
[b]Department of Clinical Biochemistry, Royal Perth Hospital, Perth, Australia
[c]School of Medicine & Pharmacology, University of Western Australia, Perth, Australia
[d]Clinical Lead, Cardiovascular Health Network, DoHWA and Hospital Liaison GP, Royal Perth Hospital, Australia
[e]Primary Health Care – General Practice, SPARHC, Faculty of Medicine, Dentistry and Health Sciences, University of Western Australia, Perth, Australia
[f]Rural Clinical School of Western Australia, University of Western Australia, Perth, Australia

Received 17 May 2013; received in revised form 6 August 2013; accepted 11 August 2013; online published-ahead-of-print 29 August 2013

Aim To determine general practitioners' (GPs') knowledge and practice regarding familial hypercholesterolaemia (FH) in Western Australia.

Method A structured questionnaire was anonymously completed by GPs. Information was sought on awareness and knowledge of FH including, diagnosis, inheritance, prevalence, cardiovascular risk, management practices and opinions on FH screening.

Results 191 GPs completed the survey, 62% were familiar with FH, 80% correctly defined FH and 68% identified the typical lipid profile, but only 33% were aware of national guidelines. There were knowledge deficits in prevalence, inheritance, and clinical features of FH, with correct responses in 27%, 45% and 38%, respectively. Most (84%) GPs considered themselves the most effective health professionals to detect FH, with 90% preferring laboratory interpretative commenting to highlight individuals at risk of FH. GPs identified appropriate cholesterol lowering drugs as mono (95%) or combination therapies (74%).

Conclusion The majority of GPs considered they were the most effective health practitioners for managing FH and preferred laboratory reports to alert them of possible FH. Although GPs knowledge of cholesterol lowering therapies was good, their awareness of national guidelines, hereditability, prevalence and diagnostic features of FH was suboptimal. Implementing a community model of care for FH requires more extensive GP education.

Keywords Familial hypercholesterolaemia • General practitioner • Knowledge • Awareness • Management practices

Introduction

Familial hypercholesterolaemia (FH) is an autosomal dominant disorder characterised by increased low-density lipoprotein cholesterol (LDL-c) concentrations, tendon xanthomata and premature atherosclerotic cardiovascular disease [1–3]. FH has a prevalence of at least 1:500 people and meets the World Health Organisation's criteria for screening. However, Australia like most countries, currently does not have a formal FH screening program, and the majority of the estimated

*Corresponding author at: Department of Clinical Biochemistry, PathWest Laboratory Medicine WA, Royal Perth Hospital, GPO Box X2213, Perth, WA 6847, Australia. Tel.: +61 8 9224 2453; fax: +61 8 9224 1789., Email: damon.bell@health.wa.gov.au

40,000 people with FH in Australia remain undiagnosed and under treated [4].Opportunistic screening for FH by general practitioners (GPs) could address this deficit [5–8]. Recently, we demonstrated that GPs request 92% of the lipid profiles in the community, confirming that they are well placed to detect individuals with FH [9]. We now sought to determine FH knowledge and management practices among GPs in Western Australia.

Methods

Subjects

A formal questionnaire was offered to all GPs attending education sessions on the assessment and management of cardiovascular risk, before the session commenced. The surveys were voluntary, kept anonymous and were completed without discussion with either the specialist leading the education session, or other GPs attending the session. There were six sessions in metropolitan Perth, and two in rural Western Australia.

Questionnaire

Participants were asked about their familiarity with FH, awareness of the National Heart Foundation/Australian Atherosclerosis Society FH Network guidelines, description of FH, identification of the typical lipid profile, prevalence and inheritance of FH, risk of CVD, definitions of premature CVD, clinical features of FH, whether the diagnosis requires genetic confirmation, methods for alerting the possibility of FH, which health professional is best placed to detect FH, number of patients with FH they currently care for, whether they perform family screening, their treatment and referral practices regarding patients with severely elevated cholesterol. GPs were asked to choose the most correct statement, or to select one or more answers from a list; there were no open questions. The questionnaire is available at https://files.meddent.uwa.edu.au/udm/FH%20Questionnaire%20GP%20v9.zip.

De-identified demographic data were sought from the participants including, gender, Fellowship of the Royal Australasian College of General Practitioners (FRACGP) status, years of practice, number of patients seen per month and if their practice was metropolitan or rural.

Analysis

Data were collated and analyses performed using Microsoft Excel 2003 and R: A language and environment for statistical computing (R Foundation for Statistical Computing, Vienna,

Table 1 Summary of GPs Responses to Questions about FH Awareness, Knowledge and Practices.

	Proportion (%)
Awareness	
Familiarity with FH rated as average or above	62
Aware of the NHF/AAS FH guidelines	33
Aware of lipid specialists	62
Knowledge	
Correctly described FH	80
Correctly identified the lipid profile	68
Correctly identified the prevalence of FH in the community	27
Correctly identified the transmission rate to first degree relatives	45
Correctly identified the CVD risk in untreated FH	29
Correctly identified the age threshold for premature CVD	30
Males	22
Females	
Correctly identified that genetic testing was not required to accurately diagnosis FH	50
Selected statins to treat hypercholesterolaemia	95
Selected a combination of statin and ezetimibe to treat severe hypercholesterolaemia	74
Practice	
Screened patients with premature CVD for FH, including screening family members	56
Unaware or unsure whether they had FH patients under their care	65
Performed routine family screening of patients with FH	53
The most prevalent age for screening young people in a kindred with FH was	52
13–18 years; which was selected by	
Referred patients to lipid specialists	27
Opinions on Detection	
Selected GPs as the most effective health care provider for the early detection of FH	84
Selected interpretative commenting on lipid profiles to highlight patients at risk of FH	90